

# Notice of Allowability

Application No.

10/531,103

Examiner

Shawn Riley

Applicant(s)

BLIDBERG ET AL.

Art Unit

2838

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 6/15/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance: As to claim 1, no prior art uncovered anticipates or renders obvious applicant(s) claimed method for control of a converter for conversion of dc voltage into ac voltage or dc voltage and vice versa, including and a fourth, in which the third and sixth units are in a conducting state, wherein the first and sixth units form a pair in that said semiconductor elements are controlled to assume, in the respective main state, the same position, turned on or off, and the fourth and fifth units form a pair in that these semiconductor elements are controlled to assume, in the respective main state, the same position, turned on or off, and wherein a change between the first and second main states is always made via the third or fourth zero state, wherein when changing between main states via a so-called small commutation loop, that is, changing between a connection of the positive pole to the output and the zero state according to the third main state, or changing between a connection of the negative pole to the output and the zero state according to the fourth main state, at least when the current direction would entail a voltage peak on essentially the entire voltage between said positive pole and said negative pole across that of the second or the third unit which does not belong to the commutation loop in those cases where the semiconductor elements which are to be turned on in the coming, main state and belong to a said pair of units were to be turned on simultaneously, an extra sequence is carried out in the form of a delayed turn-on of the semiconductor element in one unit of the latter pair relative to the semiconductor element in the other unit of said pair.

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2. Further, as to claim 28, no prior art uncovered anticipates or renders obvious applicant(s) claimed converter for conversion of dc voltage into ac voltage or dc voltage and vice versa, including the second and fifth units are in a conducting state, and a fourth, in which the third and sixth units are in a conducting state, wherein the first and sixth units form a pair in that the device is arranged to control the semiconductor elements thereof to assume, in the respective main state, the same position, turned on or off, and the fourth and fifth units form a pair in that the device is arranged to control the semiconductor elements thereof to assume, in the respective main state, the same position, turned on or off, and wherein the device is arranged to control the semiconductor elements such that a change between the first and second main states is always made via the third or fourth zero state, wherein the device is arranged, when changing between main states via a so-called small commutation loop, that is, changing between a connection of the positive pole to the output and the zero state according to the third main state, or a connection of the negative pole to the output and the zero state according to the fourth main state, at least when the current direction would entail a voltage peak on essentially the entire voltage between said positive pole and said negative pole across that of the second or the third unit which does not belong to the commutation loop in those cases where the semiconductor elements which are to be turned on in the coming main state and belong to a said pair of units were to be turned on simultaneously, to control these semiconductor elements according to an extra sequence in the form of a delayed turn-on of the semiconductor element in one unit of the latter pair relative to the semiconductor element in the other unit of said pair.

3.

Any comments considered necessary by applicant must be submitted no later than the

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payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Allowable Subject Matter*

1. Claims 1-31 are allowable over the prior art of record.

### *Conclusion*

Any inquiry from other than the applicant/attorney of record concerning this communication or earlier communications from the Examiner should be directed to the Patent Electronic Business Center (EBC) at 1.866.217.9197. Any inquiry from a member of the press concerning this communication or earlier communications from the Examiner or the application should be directed to the Office of Public Affairs at 703.305.8341. Any inquiry from the applicant or an attorney of record concerning this communication or earlier communications from the Examiner should be directed to Examiner Riley whose telephone number is 571.272.2083. The Examiner can normally be reached Monday through Thursday from 7:30-6:00 p.m. Eastern Standard Time. The Examiner's Supervisor is Karl Easthom who can be reached at 571.272.1989. Any inquiry about a case's location, retrieval of a case, or receipt of an amendment into a case or information regarding sent correspondence to a case **should be directed to 2800's Customer Service Center** at 571.272.2815. Any papers to be sent by fax MUST BE sent to fax number 703.872.9306. Any inquiry of a general nature of this application should be **directed to the Group receptionist** whose telephone number is 571.272.2800. Status information of cases may be found at <http://pair-direct.uspto.gov> wherein unpublished application information is found through private PAIR and published application information is found through public PAIR. Further help on using the PAIR system is available at 1.866.217.9197 (Electronic Business Center).

December 06



*Shawn Riley*  
*Primary Examiner*